Claims

1. A method for optimizing an active decision making process, comprising:
    a. creating a simulation model for the active decision making process;
    b. generating a plurality of alternative decisions at a choice point in the active decision making process;
    c. for one of these alternative decisions, generating a simulation of the future decision making process using the simulation model; and
    d. analyzing the result of this simulation to select a decision for the choice point.
2. The method of claim 1, wherein the simulation model comprises a stochastic component.
3. The method of claim 2, wherein the stochastic component comprises a policy for choosing among alternative decisions.
4. The method of claim 1, wherein two simulations for an alternative decision are analyzed.
5. The method of claim 1, wherein the simulation model comprises of a Bayesian network.
6. The method of claim 3, wherein the Bayesian network comprises hierarchical variables, abstract data types, differentials, user-defined functions, or POMDPs.
7. The method of claim 1, further integrating the active decision making process with an external application.
8. The method of claim 7, wherein the external application comprises a simulation system.
9. The method of claim 7, wherein the simulation model is updated using the data obtained by monitoring the external application.
10. The method of claim 1, wherein the simulation model is updated using the result of the simulation.
11. A computer implemented system for optimizing an active decision making process, comprising:
    a. a simulation model for the active decision making process;
    b. generation of a plurality of alternative decisions at a choice point in the active decision making process;
    c. for one of these alternative decisions, generation of a simulation of the future decision making process using the simulation model; and
    d. analysis of the result of this simulation to select a decision for the choice point.
12. The system of claim 11, wherein the simulation model comprises a stochastic component.
13. The system of claim 12, wherein the stochastic component comprises of a policy for choosing among alternative decisions.
14. The system of claim 13, wherein two simulations for an alternative decision are analyzed.
15. The system of claim 11, wherein the simulation model comprises of a Bayesian network.

16. The system of claim 13, wherein the Bayesian network comprises hierarchical variables, abstract data types, differentials, user-defined functions, or POMDPs.
17. The system of claim 11, further integrating the active decision making process with an external application.
18. The system of claim 17, wherein the external application comprises a simulation system.
19. The system of claim 17, wherein the simulation model is updated using the data obtained by monitoring the external application.
20. The system of claim 11, wherein the simulation model is updated using the result of the simulation.